

# Notice of Allowability

Application No.

10/800,505

Examiner

Matthew J. Daniels

Applicant(s)

BRISTOW ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed 1 August 2006.
2. ☒ The allowed claim(s) is/are 1-3, 5, 9-15, 20, 23-25, 30, 33 and 34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 20060811.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with F. Rhett Brockington on 14 August 2006.

The Claims have been amended as follows:

Claim 1: A thermoform process comprising the steps of:

placing a first sheet in a first frame and transferring the first sheet into an oven, wherein said first sheet is a low pressure, thermoformable, thermoplastic composite comprised of polypropylene and long chopped glass fibers;

heating the first sheet in the oven to a [predetermined] temperature;

placing a second sheet in a second frame and transferring the second sheet into the oven or [, if available,] an alternate oven, wherein said second sheet is a low pressure, thermoformable, thermoplastic composite comprised of polypropylene and long chopped glass fibers;

heating the second sheet in the oven to a [predetermined] temperature;

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transferring the heated first sheet to a thermoforming mold having matched mold halves;  
transferring a cover-stock material to the thermoforming mold having matched mold halves;

compressing and fusing the cover-stock material to the first sheet forming a compression molded covered first headliner part;

repeating the process until a sufficient number of compression molded covered first headliner parts are formed;

removing the matched mold halves and setting up the mold for vacuum thermoforming with a lower half mold and an opposing half mold;

transferring the compression molded covered first headliner part to the lower half mold of a vacuum thermoforming mold;

transferring the second sheet onto the opposing half mold of the vacuum thermoforming mold;

vacuum molding the second sheet forming a vacuum molded second headliner part;

positioning wiring, duct work or reinforcing components into what will become the interior compartment;

compressing the half molds of the thermoforming mold fusing regions of the compression molded covered first headliner part to the vacuum molded second headliner part, thereby forming a covered unified part comprised of said compression molded covered first headliner part and said vacuum molded second headliner part, where said covered unified part has at least one interior compartment with head impact cushioning; and

ejecting the covered unified part.

Claim 2: The thermoform process as claimed in claim 1, wherein said first sheet is a low pressure, thermoformable, thermoplastic composite that has a flexural modulus of about 900 MPa to about 1800 MPa as determined by ASTM D792.

Claim 3: The thermoform process as claimed in claim 1, wherein said second sheet is a low pressure, thermoformable, thermoplastic composite that has a flexural modulus of about 900 MPa to about 1800 MPa as determined by ASTM D792.

Claim 13: A thermoform process comprising the steps of:

placing a first sheet in a first frame and transferring the first sheet into an oven;

heating the first sheet in the oven to a [predetermined] temperature;

placing a second sheet in a second frame and transferring the second sheet into the oven

or [, if available,] an alternate oven;

heating the second sheet in the oven to a [predetermined] temperature;

transferring the heated first sheet to a thermoforming mold having matched mold halves;

transferring a cover-stock material to the thermoforming mold having matched mold

halves;

compressing and fusing the cover stock material to the first sheet forming a compression molded covered first headliner part;

[heating the second sheet in the oven to the predetermined temperature,] transferring the heated second sheet to a thermoforming mold having matched mold halves;

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transferring a reinforcing scrim material to the thermoforming mold having matched mold halves;

compressing and fusing the reinforcing scrim material to the second sheet forming a compression molded scrim reinforced second headliner part;

repeating the process until a sufficient number of compression molded covered first headliner parts and compression molded scrim reinforced second headliner parts are formed;

removing the matched mold halves and setting up the mold for vacuum thermoforming with a lower half mold and an opposing half mold;

transferring the compression molded covered first headliner part to the lower half mold of a vacuum thermoforming mold;

[transferring the second sheet onto the opposing half mold of the vacuum thermoforming mold;]

transferring and positioning the compression molded scrim reinforced second headliner part onto the opposing half mold of the vacuum thermoforming mold;

vacuum molding the scrim reinforced second headliner part to form a vacuum molded scrim reinforced second headliner part;

positioning wiring, duct work or reinforcing components into what will become the interior compartment;

compressing the half molds of the thermoforming mold fusing regions of the compression molded covered first headliner part to the [compression] vacuum molded scrim reinforced second headliner part, thereby forming a reinforced covered unified part comprised [consisting] of said compression molded covered first headliner part and said [compression] vacuum molded

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scrim reinforced second headliner part, where said reinforced covered unified part has at least one interior compartment with head impact cushioning; and  
ejecting the reinforced covered unified part.

Claim 25: A thermoform process according to claim 13, further comprising the step of:

After compressing the half molds of the thermoforming mold fusing the compression molded covered first headliner part to the vacuum molded scrim reinforced second headliner part thereby forming the reinforced covered unified part; injecting insulation into the interior compartment.

Claim 33: A thermoform process according to claim 1, further comprising the step of:

after placing a first sheet in the first frame, transferring the first sheet into a preheat oven; preheating the first sheet to a [predetermined] temperature.

Claim 34: A thermoform process according to claim 33, further comprising the step of:

after placing a second sheet in the second frame, transferring the first sheet into a preheat oven;  
preheating the second sheet to a [predetermined] temperature.

Claim 27 has been cancelled.

Claim 29 has been cancelled.

Claims 35-48 have been cancelled.

***Claim Rejections - 35 USC § 103***

2. Rejections set forth previously under this section are withdrawn in view of the persuasive arguments presented in the 1 August 2006 interview and in the response filed 1 August 2006 (pages 14 and 15).

***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance: The prior art does not teach or fairly suggest the subject matter of Claim 1 or Claim 13 in combination with the subject matter of Claim 29, namely positioning wiring, duct work or reinforcing components into what will become the interior compartment. The closest prior art of record is USPN 4529641 to Holtrop. However, Holtrop does not teach or fairly suggest positioning the claimed components prior to forming the interior compartment.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

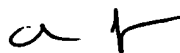
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 8/14/06

  
CHRISTINA JOHNSON  
PRIMARY EXAMINER  
8/15/06